

GENERATING A LIBRARY OF SIMULATED-DIFFRACTION SIGNALS AND HYPOTHETICAL PROFILES OF PERIODIC GRATINGS

ABSTRACT

A library of simulated-diffraction signals and hypothetical profiles of a periodic grating can be generated by generating diffraction calculations for a plurality of blocks of hypothetical layers. A diffraction calculation for a block of hypothetical layers characterizes, in part, the behavior of a diffraction beam in the block of hypothetical layers. Each block of hypothetical layers includes two or more hypothetical layers, and each hypothetical layer characterizes a layer within a hypothetical profile. The diffraction calculations for the blocks of hypothetical layers are stored prior to generating the library. The simulated-diffraction signals to be stored in the library are then generated based on the stored diffraction calculations for the blocks of hypothetical layers.